

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

**MORPHOMETRIC:**

Lake: COFFIN POND	Lake Area (ha): 7.08
Town: SUGAR HILL	Maximum depth (m): 1.6
County: Grafton	Mean depth (m): 0.7
River Basin: Connecticut	Volume (m <sup>3</sup> ): 47000
Latitude: 44°14'31" N	Relative depth: 0.6
Longitude: 71°45'53" W	Shore configuration: 2.39
Elevation (ft): 890	Areal water load (m/yr): 0.92
Shore length (m): 2200	Flushing rate (yr <sup>-1</sup> ): 1.30
Watershed area (ha): 14.0	P retention coeff.: 0.90
% watershed ponded: 0.0	Lake type: artificial

**BIOLOGICAL:**

5 January 1993

19 August 1992

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 45%	MELOSIRA 60%
	#2	SYNEDRA 30%	DINOBRYON 25%
	#3		MICROCYSTIS 5%
PHYTOPLANKTON ABUNDANCE (cells/mL)			3765
CHLOROPHYLL-A (µg/L)			12.97
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 63%	KERATELLA 53%
	#2	SYNCHAETA 25%	NAUPLIUS LARVA 20%
	#3	BOSMINA 12%	COLLOTHECA 10%
ROTIFERS/LITER		115	2670
MICROCRUSTACEA/LITER		16	1199
ZOOPLANKTON ABUNDANCE (#/L)		131	3897
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			1.0
BOTTOM DISSOLVED OXYGEN (mg/L)		11.3	10.0
BACTERIA (E. coli, #/100 ml)	#1		6
	#2		4
	#3		

**SUMMER THERMAL STRATIFICATION:**

not stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>): None  
Anoxic volume (m<sup>3</sup>): None

**CHEMICAL:**

Lake: COFFIN POND  
Town: SUGAR HILL

	5 January 1993		19 August 1992		
DEPTH (m)	1.0		1.0		
pH (units)	6.6		7.2		
A.N.C. (Alkalinity)	10.6		11.9		
NITRATE NITROGEN	0.10		< 0.02		
TOTAL KJELDAHL NITROGEN	0.24		0.69		
TOTAL PHOSPHORUS	0.012		0.024		
CONDUCTIVITY ( $\mu$ mhos/cm)	150.1		160.5		
APPARENT COLOR (cpu)	13		26		
MAGNESIUM			1.20		
CALCIUM			9.0		
SODIUM			18.3		
POTASSIUM			1.30		
CHLORIDE	34		39		
SULFATE	6		4		
TN : TP	28		29		
CALCITE SATURATION INDEX			2.1		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1992**

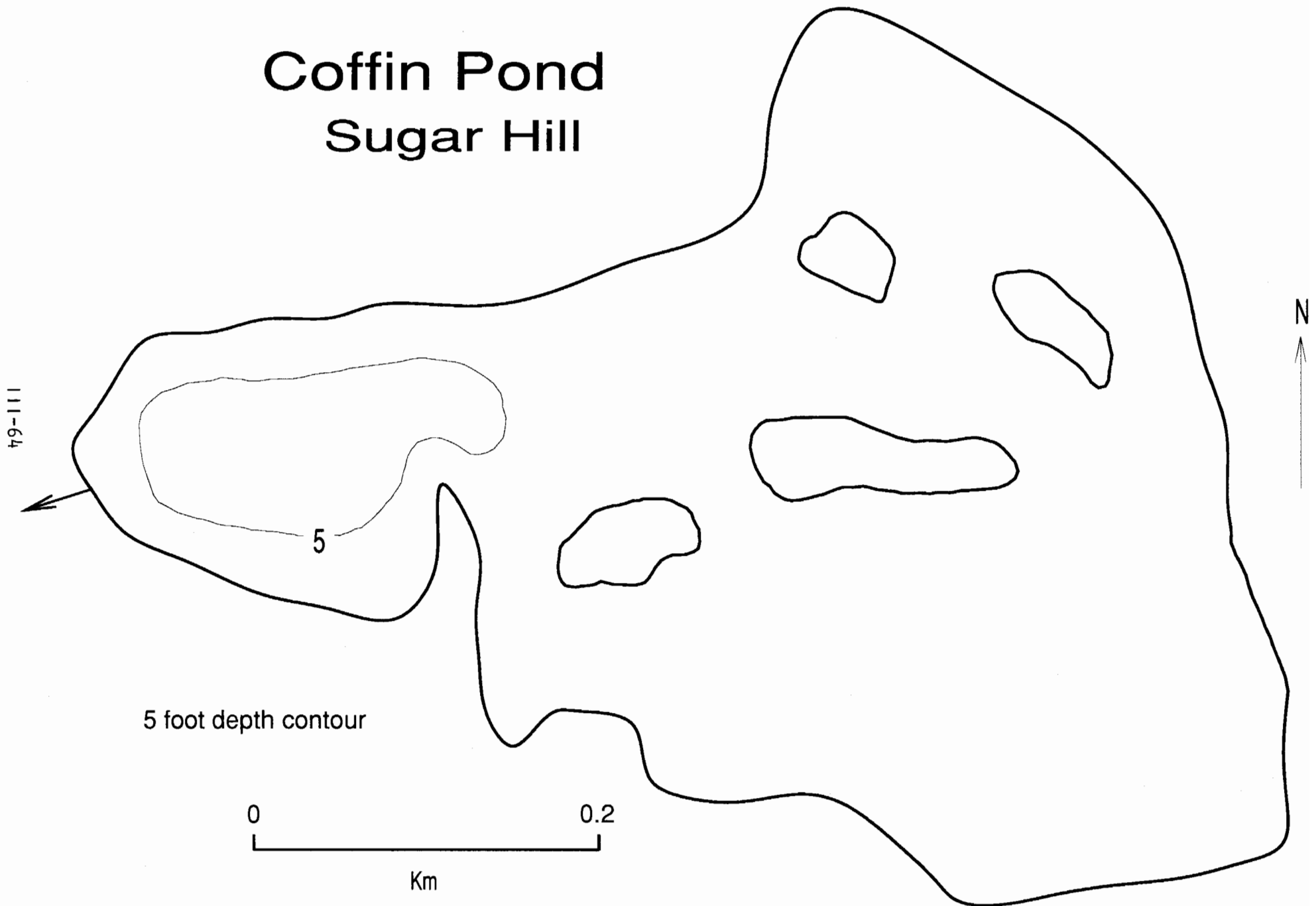
D.O. S.D. PLANT CHL TOTAL CLASS

**	5	0	3	8	Meso.
----	---	---	---	---	-------

**COMMENTS:**

1. Also known as Joe Coffin Lake.
2. This is a gravel borrow pit, dug out for the construction of I-93, that filled with water.
3. The water appeared turbid with silt; transparency was poor.
4. Boat launch was adequate but into very shallow water; parking was good.
5. Water level appeared about two feet below normal.
6. Bottom of pond was hard gravel with some silt on top.
7. The dominant genera of wholewater phytoplankton were the desmids Cosmarium (50%) and Closterium (25%).

# Coffin Pond Sugar Hill

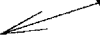


[illegible]

# Coffin Pond

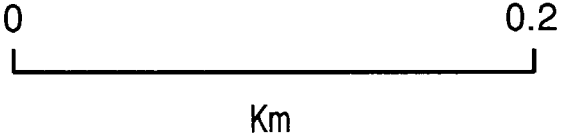
## Sugar Hill

99-111



T  
T

T  
T T



[illegible]